

We claim:

1. A movable barrier operator comprising:
  - a movable barrier movement sensor;
  - a counter that is responsive to the movable barrier movement sensor;
  - a passpoint signal generator that is responsive to movement of the movable barrier;
  - a movable barrier position determiner that is responsive to the counter and the passpoint signal generator and further comprising a self-healing mode of operation that facilitates proper passpoint usage even when an installation sequence for the movable barrier operator has not been properly followed.
2. The movable barrier operator of claim 1 wherein the movable barrier movement sensor comprises a rotational sensor.
3. The movable barrier operator of claim 1 wherein the movable barrier movement sensor comprises a linear sensor.
4. The movable barrier operator of claim 1 wherein the self-healing mode of operation comprises defining at least one zone of movable barrier movement sensor signals.
5. The movable barrier operator of claim 4 wherein the wherein the self-healing mode of operation further comprises defining the zone as comprising a predetermined number of the movable barrier movement sensor signals.
6. The movable barrier operator of claim 5 wherein the self-healing mode of operation further comprises using the at least one zone along with the counter and the passpoint signal generator to calibrate an output of the counter with respect to a passpoint as provided by the passpoint signal generator.
7. The movable barrier operator of claim 4 wherein the self-healing mode of operation further comprises at least being enabled to define at least one additional zone of movable barrier movement sensor signals.

8. A method comprising:

- initiating movement of an object towards a position;
- processing a count as a function, at least in part, of the movement of the object towards the position;
- detecting a first passpoint event;
- correlating a first value of the count with the first passpoint event;
- defining a first count zone to include:
  - a portion, but not all, of the count as corresponds to movement of the object towards the position; and
  - the first passpoint event.

9. The method of claim 8 wherein the first passpoint event is one of multiple passpoint events.

10. The method of claim 8 wherein initiating movement of an object comprises initiating movement of a movable barrier.

11. The method of claim 10 wherein initiating movement of an object towards a position comprises initiating movement of the movable barrier towards one of:

- an open position; and
- a closed position.

12. The method of claim 8 wherein processing a count comprises processing a count of revolutions that correspond to movement of the object.

13. The method of claim 8 wherein processing a count comprises at least one of:

- incrementing a count; and
- decrementing a count.

14. The method of claim 8 wherein correlating a first value of the count with the first passpoint event comprises correlating a value of the count that is substantially coincident in time to detection of the passpoint event with the first passpoint event.

15. The method of claim 8 wherein defining a first count zone further comprises defining the first count zone to not include another passpoint event.

16. The method of claim 15 wherein defining a first count zone further comprises defining the first count zone to extend no further than halfway to a next adjacent passpoint event.

17. The method of claim 8 and further comprising:

- detecting a subsequent passpoint event;
- correlating a subsequent value of the count with the subsequent passpoint event;
- defining a subsequent count zone to include:
  - a portion, but not all, of the count as corresponds to movement of the object towards the position; and
  - the subsequent passpoint event.

18. The method of claim 17 wherein defining a subsequent count zone further comprises defining the subsequent count zone to not include the first passpoint event.

19. The method of claim 18 wherein defining a subsequent count zone further comprises defining the subsequent count zone to not overlap with the first count zone.

20. The method of claim 8 and further comprising:

- detecting a first subsequent passpoint event;
- detecting a last passpoint event that is subsequent to the first subsequent passpoint event;
- defining a last count zone to include:
  - a portion, but not all, of the count as corresponds to movement of the object towards the position; and
  - the last passpoint event.

21. The method of claim 20 and further comprising defining an intervening count zone to include:

- a portion, but not all, of the count as corresponds to movement of the object towards the position; and
- the first subsequent passpoint event.

22. The method of claim 21 wherein no portion of the first count zone, the last count zone, and the intervening count zone overlap with one another.

23. The method of claim 20 and further comprising not defining a count zone that includes the first subsequent passpoint event.

24. The method of claim 8 and further comprising:

- subsequently calibrating a determined position for the object with respect to a passpoint event that occurs during the first count zone.

25. The method of claim 24 and wherein subsequently calibrating a determined position for the object with respect to a passpoint event that occurs during the first count zone further comprises not calibrating a determined position for the object with respect to a passpoint event that does not occur during the first count zone.

26. The method of claim 24 and further comprising taking a first predetermined action when a passpoint event does not occur during the first count zone.

27. The method of claim 26 wherein taking a first predetermined action includes automatically initiating a learning mode of operation.

28. The method of claim 26 wherein taking a first predetermined action includes initiating a self healing mode of recorreleating the passpoint and the position.

29. The method of claim 8 and further comprising:

- defining a last count zone to include:

- a portion, but not all, of the count as corresponds to movement of the object towards the position; and

- a last passpoint event as is detected during movement of the object towards the position;

and further comprising subsequently calibrating a determined position for the object with respect to a passpoint event that occurs during at least one of the first count zone and the last count zone.

30. The method of claim 29 and wherein subsequently calibrating a determined position for the object with respect to a passpoint event that occurs during at least one of the first count zone and the last count further comprises not calibrating a determined position for the object with respect to a passpoint event that does not occur during the first count zone and the last count zone.

31. A method for use with a movable barrier operator comprising:  
during a learning mode of operation:

- initiating movement of a movable barrier towards a predetermined position;
- maintaining a count that corresponds to the movement of the movable barrier towards the predetermined position;
- detecting a first passpoint event that corresponds to movement of the movable barrier;
- correlating a first value of the count with the first passpoint event;
- defining a first count zone to include:
  - a portion, but not all, of the count as corresponds to movement of the object towards the position; and
  - the first passpoint event;

during a first mode of operation:

- maintaining a current count that corresponds to movement of the movable barrier;
- detecting the first count zone;
- using a passpoint event as occurs during the first count zone to facilitate calibration of position determination for the movable barrier.

32. The method of claim 31 wherein maintaining a count comprises first initializing the count.

33. The method of claim 31 wherein defining a first count zone further comprises defining the first count zone to not include another passpoint event.

34. The method of claim 31 wherein the first mode of operation comprises a normal mode of operation.

35. The method of claim 31 wherein using a passpoint event as occurs during the first count zone to facilitate calibration of position determination for the movable barrier comprises modifying the current count.

36. The method of claim 31 wherein using a passpoint event as occurs during the first count zone to facilitate calibration of position determination for the movable barrier comprises modifying the first value of the count that is correlated with the first passpoint event.

37. The method of claim 31 wherein using a passpoint event as occurs during the first count zone to facilitate calibration of position determination for the movable barrier comprises modifying a physical location of the movable barrier as corresponds to the first passpoint event.

38. The method of claim 31 and further comprising:  
during the learning mode of operation:

- detecting at least one additional passpoint event that corresponds to movement of the movable barrier;
- correlating a value of the count with at least one of the at least one additional passpoint event;
- defining another count zone to include:
  - a portion, but not all, of the count as corresponds to movement of the object towards the position; and
  - the additional passpoint event.

39. The method of claim 38 wherein defining another count zone further comprises defining the another count zone to not include another passpoint event.

40. The method of claim 38 and further comprising:  
during the first mode of operation:

- detecting the another count zone;
- using a passpoint event as occurs during the another count zone to facilitate calibration of position determination for the movable barrier.

41. A movable barrier controller comprising:

- a movable barrier movement sensor input;
- a counter that is responsive to indicia of movable barrier movement as received via the movable barrier movement sensor input;
- a passpoint signal generator that is responsive to indicia of movement of the movable barrier;
  - position determination means responsive to the counter and the passpoint signal generator for automatically processing position information as corresponds to a movable barrier as a function of a passpoint event that occurs during a predetermined zone of count values.

42. The movable barrier controller of claim 41 wherein the predetermined zone of count values comprises a zone that includes a plurality of consecutive count events.

43. The movable barrier controller of claim 41 wherein the predetermined zone of count values comprises a zone that includes only a single passpoint event.

44. The movable barrier controller of claim 41 wherein the passpoint signal generator generates a plurality of passpoint events during movement of the movable barrier and wherein the predetermined zone of count values comprises a zone having a range that can only possibly contain a single one of the passpoint events.